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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,279	08/20/2001	Lie-zhong Gong	1941. PKG	4642

7590 10/14/2004
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EXAMINER

GOFF II, JOHN L

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 10/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/933,279

Applicant(s)

GONG ET AL.

Examiner

John L. Goff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-14 and 20-40 is/are pending in the application.
- 4a) Of the above claim(s) 23,25-28,33 and 35-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-14,20-22,24,29-32,34,39 and 40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/16/04 9/21/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/21/04 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

3. Applicant's election of Species I, claims 22, 24, 32, and 34 in the reply filed on 9/21/04 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). It is noted that while applicants did not specifically recite the election of species I, applicants identify the species II claims as "withdrawn" such that the election of species I was acknowledged.

Claim Rejections - 35 USC § 103

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

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claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 11-14, 20, 21, 29-31, 39, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Souder (U.S. Patent 4,156,626) in view of either one of Adams et al. (U.S. Patent 5,425,218) or Mullaney (U.S. Patent 3,331,293) and optionally further in view of any one of Chin (U.S. Patent 3,426,916), Landrum et al. (U.S. Patent 5,562,795), or Hittenberger et al. (U.S. Patent 3,340,777).

Souder discloses a method of closing a paperboard container having applied on at least one surface thereof a reactivatable adhesive. Souder teaches the reactivatable adhesive is a hot melt (e.g. thermoplastic) and comprises an energy-absorbing ingredient such as an ordinary organic dye or pigment that upon exposure to radiant energy is capable of reactivating the adhesive (Column 4, lines 33-44 and 60-63 and Column 6, lines 28-30 and 67-68 and Column 7, lines 1-2). Souder teaches providing a container having a first substrate surface with the reactivatable adhesive applied thereon, exposing the applied adhesive to visible (wavelength of about 400 nm to about 750 nm) and near-infrared (wavelength of about 750 nm to about 2,500 nm) radiant energy to reactivate the applied adhesive, and then pressing the first substrate surface to a second substrate surface to close the container (Figure 2 and Column 4, lines 33-44 and Column 5, lines 49-55). Souder teaches a plurality of the containers are closed through a continuous conveying operation (Figure 2 and Column 5, lines 55-58). Souder does not

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specifically recite the time required for reactivating the adhesive and pressing the first substrate surface. However, Souder teaches the line speed of the continuous operation is controlled by adjusting the area and intensity of the applied radiant energy such that high efficiency heating is obtained (Column 7, lines 17-33 and Column 9, lines 54-56 and Column 10, lines 1-2), and thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize these parameters as a function of the quality of product produced as doing so would have required nothing more than ordinary skill and routine experimentation. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to operate the continuous container closing operation taught by Souder under conventional closing times (i.e. the time to reactive the adhesive and press the first substrate surface to the second substrate surface, the dwell time) of less than one second as it was well known and conventional in the art to efficiently produce continuously closed containers using a reactivatable adhesive with a closing time of one second or less as shown for example by either one of Adams et al. or Mullaney, it being further optionally noted conventional continuous container closing lines operate at speeds of 70 to 300 containers per minute as shown for example by any one of Chin, Landrum et al., or Hittenberger et al.

Adams et al. and Mullaney et al. are exemplary of conventional continuous container closing line operations in the art using reactivatable adhesives wherein the time to reactive the adhesives and close the containers is one second or less (Column 1, lines 19-24 and Column 4, lines 22-38 and Column 5, lines 55-58 of Adams et al. and Column 1, lines 14-18, 25-31, and 47-58 and Column 3, lines 59-62 of Mullaney). Chin, Landrum et al., and Hittenberger et al. are exemplary of conventional continuous container closing line operations in the art using

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reactivable adhesives wherein the lines operate at speeds of 70 to 300 containers per minute (Figure 1 and Column 2, lines 50-53 and Column 5, lines 57-66 of Chin and Figure 1 and Column 5, lines 40-44 of Landrum et al. and Figure 1 and Column 1, lines 51-54 and Column 3, lines 36-37 of Hittenberger et al.)

6. Claims 22, 24, 32, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Souder, either one of Adams et al. or Mullaney, and optionally any one of Chin, Landrum et al., or Hittenberger et al. as applied to claims 11-14, 20, 21, 29-31, 39, and 40 above, and further in view of Jones et al. (WO 00/20157).

Souder, either one of Adams et al. or Mullaney, and optionally any one of Chin, Landrum et al., or Hittenberger et al. as described above teach all of the limitations in claims 22, 24, 32, and 34 except for a specific teaching of dissolving the dye in the reactivable adhesive. However, it is noted Souder teaches dyeing the adhesive such that the dye is carried within the adhesive, and thus, it appears Souder discloses dissolving the dye within the adhesive (Column 4, lines 39-44 and Column 6, lines 67-68 and Column 7, lines 1-2). In any event, it would have been obvious to one of ordinary skill in the art at the time the invention was made to dissolve the dye taught by Souder within the reactivable adhesive for maximum dye utility/efficiency as was conventional in the art as shown for example by Jones et al.

Jones et al. disclose a method for bonding together two substrates (e.g. thin films) using a reactivable adhesive. Jones et al. teach the reactivable adhesive is a hot melt (e.g. thermoplastic) and comprises an energy-absorbing ingredient such as an organic dye dissolved in the adhesive that upon exposure to radiant energy is capable of reactivating the adhesive (Page 2, lines 27-33 and Page 3, lines 10-37 and Page 4, lines 1-3 and 12-16 and 25-29 and Page 5, lines

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28-34 and Page 11 lines 10-13). Jones et al. teach dissolving the dye within the adhesive provides maximum dye utility/efficiency (Page 11, lines 14-18). Jones et al. teach providing a first substrate surface having the reactivatable adhesive applied thereon (e.g. co-extruded or overmolded), exposing the applied adhesive to near-infrared and infrared (wavelength of greater than 780 nm) radiant energy to reactivate the applied adhesive, and then pressing the first substrate to a second substrate (Figure 2 and Page 6, lines 6-13 and Page 8, lines 4-29 and Page 9, lines 8-14 and Page 11, lines 14-18).

7. Claims 11, 20-22, 24, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al. in view of Foglia et al. (U.S. Patent 3,560,291).

Jones et al. is described above in full detail. Jones et al. do not specifically recite the time required for reactivating the adhesive. However, Jones et al. are not limited to any particular time such that it would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize the reactivating parameters as a function of the quality of product produced as doing so would have required nothing more than ordinary skill and routine experimentation. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to perform the method taught by Jones et al. using reactivating times of a fraction of a second as it was well known and conventional in the art to efficiently produce bonded thin films in a fraction of a second as shown for example by Foglia et al.

Foglia et al. are exemplary of conventional thin film bonding operations wherein the films are bonded using radiant energy in a fraction of a second (Figure 1 and Column 1, lines 54-58).

Response to Arguments

8. Applicant's arguments with respect to claims 11-14, 20-22, 24, 29-32, 35, 39, and 40 have been considered but are moot in view of the new ground(s) of rejection. The rejections using Shaw et al. (U.S. Patent 5,498,304) are withdrawn in view of applicants amendment and arguments to claim 11 positively requiring a first substrate having applied thereon a reactivatable adhesive that is not activated and then reactivating the adhesive in a later step to join the first substrate to a second substrate. Regarding applicants arguments to Jones et al., it is noted Jones et al. disclose bonding two substrates by applying radiant energy to a preapplied reactivatable melt thermoplastic comprising a dissolved organic dye. The reactivatable melt thermoplastic taught by Jones et al. is the same as the reactivatable adhesive claimed and is consistent and in agreement with applicants specification (Page 5, lines 4-10 and Page 7, lines 16-26).

Furthermore, applicants have not established any differences between the reactivatable melt thermoplastic taught by Jones et al. and the reactivatable adhesive of the invention such that both are clearly the same. Applicant argues it essential to Souder that visible light is used. The claims are not commensurate in scope with this argument as visible light wavelengths (about 400 nm to about 750 nm) are claimed. Furthermore, Souder discloses the use of both visible and near-infrared radiant energy (about 400 nm to about 2,500 nm). Applicant further argues in Souder it is preferable that both of the contacting surfaces are coated. The claims are not commensurate in scope with this argument. Furthermore, Souder is not limited to coating both surfaces. Applicant further argues Souder does not disclose any particular adhesive comprising an energy absorbing additive. The claims are not commensurate in scope with this argument as

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no particular adhesive is claimed. Souder discloses dyed thermoplastics such that the claimed limitations are met.

Conclusion


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **(571) 272-1216**. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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